

Application no. 10/072,220
Amendment dated: August 14, 2003
Reply to office action dated: April 15, 2003

REMARKS

Claims 1-13, 15-17, 20-38 and 41-45 are pending in the application. By this paper, claims 1, 3-5, 7, 8, 15, 17, 21-24, 33-38, and 42-44 have been amended. Claims 14, 18, 19, 39 and 40 have been cancelled. New claim 45 has been added. No new matter is added by these amendments. Reconsideration and allowance of claims 11-13, 15-17, 20-38 and 41-45 in light of the amendments and arguments herein are respectfully requested.

Rejection under 35 U.S.C. § 101

Claims 42-44 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. According to the office action, these claims merely contain a computer program code per se, noting the "Examination Guidelines for Computer-Related Inventions" ("Examination Guidelines") published by the USPTO, February, 1996, pages 7-10 and box 7.

By this paper, claims 42-44 have been amended to overcome this rejection. Specifically, claim 42 has been amended to recite

An article comprising:
a computer readable data storage medium; and
computer program code recorded on the computer readable data storage
medium for managing an advertising flight of an advertiser with an
online marketplace system.

Corresponding amendments have been made to claims 43 and 44 which are dependent on claim 42. Support for this amendment is found at page 1, lines 13-15. It is respectfully submitted that these amendments overcome the rejection under section 101. As noted in the Examination Guidelines at page 9,

In contrast, a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer program and the medium

which permit the computer program's functionality to be realized, and is thus statutory.

As amended, claim 42 recites an article comprising a computer readable data storage medium and computer program code recorded on the computer readable data storage medium, in accordance with the guideline quoted above. Accordingly, withdrawal of the 35 U.S.C. § 101 rejection of claims 42-44 is respectfully requested.

Rejection under 35 U.S.C. § 112

Claim 1. Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Further, claims 2-22 stand objected to as being dependent on a rejected base claim.

Claim 1 has been amended to change the recitation in line 6 of "the pay for placement marketplace" to "the online marketplace" to make this recitation consistent with the recitation in lines 1-2. Accordingly, withdrawal of the 35 U.S.C. § 112 rejection of claim 1 and the objection to claims 2-22 is respectfully requested.

Claim 24. Claim 24 stands rejected under 35 U.S.C. § 112, second paragraph. Further, claims 25-41 stand objected to as being dependent on a rejected base claim.

Claim 24 has been amended to recite that the search engine is responsive to search queries received over a computer network, as proposed by the examiner. Further, new claim 45 has been added to specify that the search queries are received over the Internet. Accordingly, withdrawal of the 35 U.S.C. § 112 rejection of claim 24 and the objection to claims 25-41 is respectfully requested.

Claims 7 and 8. Claims 7 and 8 stand rejected under 35 U.S.C. § 112, second paragraph. According to the office action, the terms "maximize advertiser profit" and "a maximum cost per click" are vague, since the term "maximum" is a relative term of degree.

These rejections of claims 7 and 8 are respectfully traversed and it is submitted that the claim terminology is sufficiently definite, when read in the context of each claim taken as a whole and the written description of the invention, to satisfy the standard of 35 U.S.C. § 112. Consider the term "maximize advertiser profit." At page 3, lines 3-11, it is stated that

The goals of flight management in a CPC marketplace are to: ... 4) ensure that the **advertiser profit is maximized**. This means that for the fixed flight budget the advertiser receives the maximum possible clicks. The advertiser will receive the maximum number of clicks if the average CPC for all the listings is the lowest. Since the flight budget is fixed, having the maximum possible clicks is equivalent to maximizing the advertiser ROI. (*emphasis added*)

Further, at page 4, lines 20-24, it is stated that

In addition, an advertiser must set the CPC for every listing in order to **maximize profit**. A higher CPC for a listing results in a better rank, which generally leads to more clicks, but the average cost/click goes up (due to the higher CPC). The total profit is the product of 1) the number of clicks and 2) the average profit/click minus the average cost/click. (*emphasis added*).

Still further, at page 6, lines 20-27, it is stated that

There are other marketplace conditions that advertisers must keep track of in order to **maximize profit**. These include checking if the bid of a listing is too high for its current rank. For example, an advertiser A_1 may set the CPC of a listing to \$.50 for the listing to be at rank 2—advertiser A_2 is at rank 3 with a CPC of \$.49. A few hours later, A_2 changes the CPC of his listing to \$.45, while still remaining at rank 3. Advertiser A_1 can now reduce the CPC of his listing from \$.50 to \$.46, while still maintaining the listing at rank 2. (*emphasis added*)

Still further, at page 10, line 24 to page 11, line

For every term T_i in $\{T_1, T_2, \dots, T_k\}$, given its bid b_i and its estimated number of clicks c_i , it is possible to determine:...

5. the total advertiser profit, which is the sum of the profit for every term. The profit for term T_i is the product of 1) the number of clicks

and 2) the profit/click minus the cost/click, which is $c_i(P \times R - b_i)$.

Therefore, the total profit is $T = \sum_{i=1}^k c_i(P \times R - b_i)$. This is approximately equal to $c_i \times P \times R - B$, if the total cost over the flight $\sum_{i=1}^k c_i \times b_i$ is approximately equal to the flight budget B .

The total advertiser profit for the flight, $T \approx c_i \times P \times R - B$, can be optimized by maximizing the total number of clicks c_i . (*emphasis added*)

Still further, at page 18, lines 28-31, it is stated that

As described earlier, generating the highest number of clicks for the budget **maximizes the total advertiser profit**. This is equivalent to having the lowest average bid for all the terms being bid on, while spending the total flight budget. (*emphasis added*)

Many other examples abound in the written description of the invention.

With respect to the term “maximum cost per click,” at page 2, lines 25-30, it is stated that

It requires considerably more effort for an advertiser to manage flight in a CPC marketplace. The input parameter to flight management in a CPC marketplace are... and 4) **the maximum average CPC for the listings** (any higher CPC will result in a loss to the advertiser). (*emphasis added*)

where “CPC” is an acronym for “cost per click.” Further, at page 4, lines 16-19, it is stated that

For example, if 1% of the searchers transferred to an advertiser’s web site buy a digital camera, which results in an average profit to the advertiser of \$100, then **the maximum CPC for the listing is \$1.00** (anything higher will result in a loss). (*emphasis added*)

Still further, at page 9, lines 24-30, it is stated that

An advertiser describes the parameters of the advertising flight by specifying:

...
4. one or more of the following:

C: the maximum average CPC over all the terms (*emphasis added*)

Thus, maximum CPC is *an input* to the system in one embodiment. This is further made clear at page 13, lines 21-24:

In the first embodiment of Automatic Flight Management, the system takes as **input from an advertiser**: 1) a set of listings for the flight with the terms $\{T_1, T_2, \dots, T_k\}$, 2) the budget B , 3) the **maximum CPC** C , and 4) the conversion rate R and average profit/action P .

Many other explanatory examples abound.

Accordingly, it is respectfully submitted that, read in the context of the written description, the claim terms "maximize advertiser profit" and "maximum cost per click" or "maximum CPC" are sufficiently definite to meet the standard of 35 U.S.C. § 112. Withdrawal of the rejection of claims 7 and 8 is respectfully requested.

Claims 10 and 11 Claims 10 and 11 stand rejected under 35 U.S.C. § 112, second paragraph. According to the office action, the term "conversion rate" as used in these claims is indefinite.

This rejection is respectfully traversed. It is respectfully submitted that the noted claim terminology is sufficiently definite, when read in the context of each claim taken as a whole and the written description of the invention, to satisfy the standard of 35 U.S.C. § 112. Many examples are provided in the written description. For example, at page 4, lines 10-15, it is stated

This requires computing the **conversion rate** for all possible actions—computing the probability that a searcher will perform each of the possible actions once he is transferred to the advertiser's web site. The possible actions can include registering, buying an item, applying for a loan, etc. **The conversion rates** for the various actions are combined



with the average profit/action to compute the expected profit/click.
(emphasis added)

Further, at page 9, line 23 to page 10, line 3, it is stated

An advertiser describes the parameters of the advertising flight by specifying:

5. R : the conversion rate, which is the fraction of the searchers that perform an action at the advertiser's web site:

Thus, the *conversion rate* is an input in one embodiment of the system. In another embodiment described at page 12, lines 24-27,

It is also possible that different terms have different **conversion rates**. So instead of having a **single conversion rate** R , the advertiser specifies a **conversion rate** $R(T_i)$ for every term T_i in $\{T_1, T_2, \dots, T_k\}$. Let R_{\max} be the highest conversion rate for the term T_j . *(emphasis added)*

Accordingly, it is respectfully submitted that, read in the context of the written description, the claim term "conversion rate" is sufficiently definite to meet the standard of 35 U.S.C. § 112. Withdrawal of the rejection of claims 10 and 11 is respectfully requested.

Claim 14. Claim 14 stands rejected under 35 U.S.C. § 112. This claim has been cancelled.

Claim 15. Claim 15 stands rejected under 35 U.S.C. § 112. By this paper, claim 15 has been amended to improve the definiteness of this claim. The claim has been amended to recite that at least some search terms of the online marketplace have an associated rank. No new matter is added by this amendment. The relationship between search listings and ranks is explained at page 25, lines 20-22 of the present application. The term rank is defined as follows in the incorporated application serial number 09/918,241:

Finally, a rank value is a value generated dynamically, preferably by the processing system 34 of the account management server 22 shown in FIG. 1, each time an advertiser places a bid or a search enters a search query. The rank value of an advertiser's search listing determines the placement location of the advertiser's entry in the search result list generated when a search is executed on the corresponding search term.

It is respectfully submitted that, as amended, claim 15 recites the claimed subject matter with sufficient definiteness to satisfy the standard of 35 U.S.C. § 112. Withdrawal of the 35 U.S.C. § 112 rejection of claim 15 is respectfully requested.

Claim 16. Claim 16 stands rejected under 35 U.S.C. § 112. Claim 16 is dependent from claim 15. As noted above, claim 15 has been amended to more definitely define the term "rank," thereby providing more clear antecedent basis for the term "threshold rank" in claim 16. Withdrawal of the 35 U.S.C. § 112 rejection of claim 16 is respectfully requested.

Claim 17. Claim 17 stands rejected under 35 U.S.C. § 112. Claim 17 is dependent from claim 15. Claims 15 and 17 have been amended to more clearly recite the subject matter defined by claim 17. No new matter is added by this amendment. Support for this amendment is found at page 22, lines 15-23. Withdrawal of the 35 U.S.C. § 112 rejection of claim 17 is respectfully requested.

Claims 18 and 19. Claims 18 and 19 stand rejected under 35 U.S.C. § 112. Claims 18 and 19 have been cancelled.

Claim 22. Claim 22 stands rejected under 35 U.S.C. § 112. Claim 22 is dependent from claim 21. Claim 21 has been amended to recite that search terms of the online marketplace have an associated bid amount. Claim 22 has been amended to clarify that adjusting the bid amount comprises reducing the bid amount for a search term to level just exceeding the next-lowest bid amount. No new matter is added by this

amendment. Support for this amendment is found at page 18, lines 5-11 of the application.

Claim 23. Claim 23 stands rejected under 35 U.S.C. § 112. The office action asserts that the term "transferring economic value" is unclear. This rejection is respectfully traversed. Support for this term is located in the application at page 7, line 31 to page 8, line 11, and particularly at page 8, lines 8-9, and at page 8, lines 12-20. Accordingly, withdrawal of the 35 U.S.C. § 112 rejection of claim 23 is respectfully requested.

Claims 26 and 28-32. Claims 26 and 28-32 stand rejected under 35 U.S.C. § 112, second paragraph. According to the office action, the terms "maximize advertiser cost per click" and "maximum profit are vague, since the term "maximum" is a relative term of degree.

These rejections of claims 26 and 28-32 are respectfully traversed and it is submitted that the claim terminology is sufficiently definite, when read in the context of each claim taken as a whole and the written description of the invention, to satisfy the standard of 35 U.S.C. § 112. Reference is made to the response to the rejections of claims 7 and 8 above, where it is pointed out that the written description is replete with examples of the use of this terminology and that a person ordinarily skilled in the art of computer and data processing systems and online advertising would readily understand the concepts implicit in these terms. Accordingly, withdrawal of the 35 U.S.C. § 112 rejection of claims 26 and 28-32 is respectfully requested.

Claim 33. Claim 33 stands rejected under 35 U.S.C. § 112. This claim has been substantially amended to more definitely recited the claimed subject matter. Also, though, the office action asserts that the recitation "having different conversion rates at different ranks" is unclear. It is respectfully submitted that this recitation is completely clear when read in conjunction with the written description of the application, particularly

beginning at page 12, line 23 through page 13, line 7. Withdrawal of the 35 U.S.C. § 112 rejection of claim 33 is respectfully requested.

Claims 34 and 35. Claims 34 and 35 stand rejected under 35 U.S.C. § 112. The office action asserts that the term "highest profit" is indefinite since "highest" is a relative term. Claims 34 and 35 have been amended to recite instead a "maximum profit." While "maximum" profit may be considered a relative term, it is respectfully submitted that, as noted above, the written description of the present application includes many examples and definitions clearly explaining this term in a manner readily understood by a person ordinarily skilled in the art. Accordingly, withdrawal of the 35 U.S.C. § 112 rejection of claims 34 and 35 is respectfully requested.

Claim 36. Claim 36 stands rejected under 35 U.S.C. § 112. This claim has been amended to delete reference to "an optimal solution" and instead refer to providing the maximum profit to the advertiser, consistent with claim 35, from which this claim depends. Accordingly, withdrawal of the 35 U.S.C. § 112 rejection of claim 36 is respectfully requested.

Claim 37. Claim 37 stands rejected under 35 U.S.C. § 112. Claim 37 has been amended to improve the definiteness of this claim. The claim has been amended to recite that at least some search terms of the database have an associated rank. No new matter is added by this amendment. The relationship between search listings and ranks is explained at page 25, lines 20-22 of the present application. Moreover, claim 37 is amended to recite that the flight management agent is configured to "exclude from further analysis" certain search terms. Antecedent basis for this is provided at claim 35, where it is recited that the flight management agent is configured "to analyze" only certain combinations of bids. It is respectfully submitted that, as amended, claim 37 recites the claimed subject matter with sufficient definiteness to satisfy the standard of 35 U.S.C. § 112. Withdrawal of the 35 U.S.C. § 112 rejection of claim 15 is respectfully requested.

Claim 38. Claim 38 stands rejected under 35 U.S.C. § 112. Claim 38 has been amended to more clearly recite the subject matter defined by this claim. It is respectfully submitted that the term "click threshold" is defined in the present application at page 58, line 30 to page 59, line 25 and in FIG. 28 of the application, including the procedure Filter Min Clicks disclosed in connection with one embodiment of the present invention. Withdrawal of the 35 U.S.C. § 112 rejection of claim 38 is respectfully requested.

Claims 39 and 40. Claims 39 and 40 stand rejected under 35 U.S.C. § 112. Claims 39 and 40 have been cancelled.

Rejection under 35 U.S.C. § 103

Claims 1-44 stand rejected under 35 U.S.C. § 103 as being unpatentable over eBay or U.S. patent number 5,835,896 to Fischer, et al. ("Fischer"). In a telephone interview with the examiner on July 15, 2003, the undersigned attorney asked the examiner to provide documentary evidence of the cited eBay reference. By facsimile transmission on July 16, the examiner sent several articles related to the commercially available eBay service and an updated or supplemental form PTO-892 listing these references. These references and the PTO-892 are received with thanks from the examiner.

By this paper, independent claims 1, 24 and 42 have been amended to clarify the distinction between the invention defined by these claims and an online auction system as defined by eBay and Fischer. The disclosed method, system and article of manufacture relate to a pay for placement online marketplace in which a database stores advertiser search listings. Each search listing includes at least a search term and a bid amount. A flight management agent or other device reviews and adjusts the bid amounts in response to flight parameters from the advertiser. When a search query from a search matches a search term of the search listing, that search listing is referred to the searcher with other search results. The search listings may be ranked according

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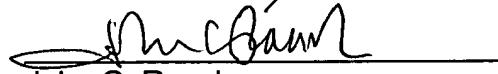
to the bid amounts of the search listings so that a higher bid amount produces a search listing ranked or positioned higher in the search result list.

In contrast, the online auction systems of eBay and Fischer instead relate to a system where an object is available for sale at auction by a seller. Buyers can view information about the item and place bids on the item. No information from the auction system is ranked or ordered according to the bids, which are only used to determine the successful buyer.

Accordingly, as amended, claims 1, 24 and 41 each recite limitations nowhere shown in the prior art of record. Withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1-44 is therefore respectfully requested.

With this response, the application is believed to be in condition for allowance. Should the examiner deem a telephone conference to be of assistance in advancing the application to allowance, the examiner is invited to call the undersigned attorney at the telephone number below.

Respectfully submitted,


John G. Rauch
Registration No. 37,218
Attorney for Applicant

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BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200